

REMARKS

Applicant respectfully requests reconsideration of the pending claims in view of the following remarks.

The abstract of the disclosure was objected to; and, the abstract is amended. Without admitting the propriety of the objection, Application respectfully submits that the amended abstract does not contain the description that caused the objection.

Claims 1, 10, 19 and 28 were rejected under 35 U.S.C. 112, first paragraph. Without admitting the propriety of the rejection, Application respectfully submits that the amended claims 1, 10, 19, 28 do not recite the corresponding limitations that caused the rejection. Thus, the withdrawal of the rejected under 35 U.S.C. 112, first paragraph is respectfully requested.

Claims 1-36 were rejected under 35 U.S.C. §102(e) as being anticipated by MacInnis et al (U.S. Patent 6,501,480, hereafter MacInnis). Claims 1-36 are amended to particularly point out and distinctly claim the subject matter.

At least one embodiment of the present invention relates to the processing of images using scripts. A script is written for the processing in a particular color space (e.g., in a RGB color space). However, a processing engine may prefer a different color space (e.g., YUV); and, the input data and output data may be in different color spaces. In one embodiment of the present invention, the commands of the script are examined to determine which color space is to be used according to the behavior of the commands in order to provide a mechanism for color-space neutral scripting.

Note that graphics data which represents images in one or more color spaces are distinguishable from commands of a script that manipulates the graphics data.

MacInnis relates to a graphics accelerator. Applicant does not see a portion of MacInnis that is related to the interpreting and processing of commands in a script. For example, claim 1 (amended) recites:

1. A method, comprising:
retrieving a first command from a script written for a first color space;
determining a behavior of the first command, wherein the behavior of the first command is:
unique when the first command operates only in the first color space,
transparent when the first command generates similar results in the first color space and in a second color space, and
different when the first command generates different results in the first color space and in the second color space; and
processing an operation associated with the first command in a preferred color space according to the behavior of the first command.

MacInnis does not contain a description in which a command of *a script written for a first color space* is examined to determine the type of behavior of the command (e.g., unique, transparent, or different) so that the processing specified by the command is carried out according to the behavior of the command (e.g., carried out in a preferred color space, rather than simply in the first color space as it was written). Thus, MacInnis does not anticipate claim 1. Similarly, MacInnis does not anticipate independent claims 10, 19 and 28.

Further, claim 2 recites:

2. The method of claim 1, wherein the preferred color space is determined to minimize color space conversion.

MacInnis does not contain a description of determining a preferred color space for the processing of a command of a script that is written for a first color space. MacInnis (Col. 41, lines 11-23) describes the scaling of the images to minimize memory usage and memory bandwidth demands. Thus, MacInnis does not anticipate claim 2.

Further, claim 3 recites:

3. The method of claim 1, wherein the preferred color space is the second color space when data of at least one of input buffers and output buffers is in the second color space.

MacInnis does not contain a description of determining the second color space as the preferred color space for the processing of a command of *a script written for a first color space*, when some of the data for the command is in the second color space.

MacInnis (Col. 7, lines 14-25 and Col. 9, lines 5-23) describes a RGB to YUV converter. However, MacInnis does not show a command of a script written for a first color space, which causes the processing of an operation in a second color space when some of the input/output data for the command is in the second color space. Thus, MacInnis does not anticipate claim 3.

Further, claim 6 recites:

6. The method of claim 1, wherein when the behavior of the first command is different, the first command is transformed to a second command in the second color space, wherein the second command performs a similar operation in the second color space as the first command in the first color space.

MacInnis does not contain a description of transforming a first command command of *a script written for a first color space* to *a second command in the second color space* when the behavior of the first command is such that the first command generates different results in the first color space and in the second color space. MacInnis (Col. 7, 14, and Col. 9, lines 5-34) is not related to the subject matter as claimed. Thus, MacInnis does not anticipate claim 6.

Further, claim 7 recites:

7. The method of claim 6, wherein one or more parameters of the first command are transformed to comparable parameters for the second command such that the second command performs the similar operation in the second color space as the first command in the first color space.

The description of MacInnis (Figure 5 and 10, Col. 9) where different converters perform different tasks in different and similar formats does not show a mechanism for the processing of a command of a script in a way that is similar to what is claimed. A person skilled in the art understands that parameters for a command for processing graphics data are different from the graphics data that is to be processed. Thus, MacInnis does not anticipate claim 7.

Further, claim 9 recites:

9. The method of claim 7, wherein if the one or more parameters of the first command cannot be transformed to comparable parameters for the second command, the first command is processed as if the behavior of the first command is unique.

MacInnis does not contains a description of a mechanism for deciding how to process the command of a script *written for a first color space* depending on whether or not the parameters of the command can be transformed to comparable parameters for a second command in a second color space. Thus, MacInnis cannot anticipate claim 9.

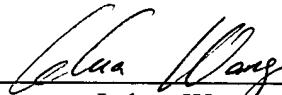
Similarly, at least for the above-discussed reasons, dependent claims 11-18, 20-27 and 29-36 are patentable over MacInnis.

In view of the above discussion, Applicant respectfully submits that the pending claims (amended) are patentable over the cited references, including MacInnis. However, if the examiner will maintain the same position for the rejection under 35 U.S.C. §102(e) in view of a particular way to read the claim limitations on the prior art references, none of which is currently apparent to Applicant, Applicant respectfully requests the examiner to particularly point out how the elements of the prior art references are applied.

Please charge any shortages or credit any overages to Deposit Account No. 02-2666. Furthermore, if an extension is required, Applicant hereby requests such extension.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW THE CHANGES MADE

IN THE ABSTRACT:

Please amend the abstract as indicated below.

--A first command is retrieved from a script containing one or more commands written for a first color space. [The first command is associated with zero or more input buffers and zero or more output buffers. The first command has zero or more parameters.] A behavior of the first command in the first color space and in a second color space is determined. The behavior comprises one of unique behavior, transparent behavior, and different behavior. The first command has the unique behavior when the first command only operates in the first color space. The first command has the transparent behavior when the first command generates similar results in the first color space and in the second color space. The first command has the different behavior when the first command generates different results in the first color space and in the second color space. Using the behavior of the first command, an operation associated with the first command is processed. The operation is processed in a preferred format based on current formats of the input buffers. --

IN THE CLAIMS:

Please amend the following claims as indicated below.

1. (amended) A method, comprising:
retrieving a first command from a script [containing one or more commands]
written for a first color space[, the first command associated with zero or
more input buffers and zero or more output buffers, the first command
having zero or more parameters];
determining a behavior of the first command [in the first color space and in a
second color space, the behavior comprising one of unique behavior,
transparent behavior, and different behavior], wherein the behavior of the
first command [has] is:
[the] unique [behavior] when the first command [only] operates only in the
first color space,
[the] transparent [behavior] when the first command generates similar
results in the first color space and in [the] a second color space,
and
[the] different [behavior] when the first command generates different
results in the first color space and in the second color space; and
processing an operation associated with the first command [using] in a preferred
color space according to the behavior of the first command[, wherein the
operation is processed in a preferred format based on current formats of
the input buffers].
2. (amended) The method of claim 1, wherein the preferred [format] color space is
determined to minimize color space conversion [of the input buffers].
3. (amended) The method of claim 1, wherein the preferred [format] color space is [a
format used with] the second color space when data of at least one of [the] input
buffers and output buffers is in [the format used with] the second color space.

4. (amended) The method of claim 1, wherein said processing [the first command in the preferred format] comprises converting data in one input buffer [the input buffers] to the preferred color space[format].
5. (amended) The method of claim 1, wherein when the behavior of the first command [has the] is unique [behavior], the preferred [format] color space is [a format used with] the first color space.
6. (amended) The method of claim 1, wherein when the behavior of the first command [has the] is different [behavior], the first command is transformed to a second command in the second color space, wherein the second command performs a similar operation in the second color space as the first command in the first color space.
7. (amended) The method of claim 6, wherein [if the second command can not perform the similar operation with the zero] one or more parameters of the first command[, the parameters] are transformed to comparable parameters for the second command such that the second command performs the similar operation in the second color space as the first command in the first color space.
8. (amended) The method of claim 7, wherein the comparable parameters are compatible with the preferred [format] color space.
9. (amended) The method of claim 7, wherein if the [zero] one or more parameters of the first command cannot be transformed to comparable parameters for the second command, [operate] the first command is processed as if the behavior of

the first command is unique [with the unique behavior instead of with the different behavior].

10. (amended) A computer readable medium having stored thereon sequences of instructions which are executable by a digital processing system, and which, when executed by the digital processing system, cause the system to perform a method comprising:

retrieving a first command from a script [containing one or more commands]

written for a first color space[, the first command associated with zero or more input buffers and zero or more output buffers, the first command having zero or more parameters];

determining a behavior of the first command [in the first color space and in a second color space, the behavior comprising one of unique behavior, transparent behavior, and different behavior], wherein the behavior of the first command [has] is:

[the] unique [behavior] when the first command [only] operates only in the first color space,

[the] transparent [behavior] when the first command generates similar results in the first color space and in [the] a second color space, and

[the] different [behavior] when the first command generates different results in the first color space and in the second color space; and

processing an operation associated with the first command [using] according to the behavior of the first command[, wherein the operation is processed in a preferred format based on current formats of the input buffers].

11. (amended) The computer readable medium of claim 10, wherein a preferred color space [the preferred format] is determined to minimize color space conversion [of the input buffers] in processing the operation associated with the first command.
12. (amended) The computer readable medium of claim 10, wherein said processing the operation associated with the first command is in [the preferred format is a format used with] the second color space when data of at least one of [the] input buffers and output buffers is in [the format used with] the second color space.
13. (amended) The computer readable medium of claim 10, wherein said processing [the first command in the preferred format] comprises converting data in one input buffer [the input buffers] to [the] a preferred format.
14. (amended) The computer readable medium of claim 10, wherein when the behavior of the first command [has the] is unique [behavior], [the preferred format is a format used with] said processing the operation associated with the first command is in the first color space.
15. (amended) The computer readable medium of claim 10, wherein when the behavior of the first command [has the] is different [behavior], the first command is transformed to a second command in the second color space, wherein the second command performs a similar operation in the second color space as the first command in the first color space.
16. (amended) The computer readable medium of claim 15, wherein [if the second command can not perform the similar operation with the zero] one or more

parameters of the first command[, the parameters] are transformed to comparable parameters for the second command such that the second command performs the similar operation in the second color space as the first command in the first color space.

17. (amended) The computer readable medium of claim 16, wherein the comparable parameters are compatible with [the preferred format] the second color space.
18. (amended) The computer readable medium of claim 16, wherein if the one [zero] or more parameters of the first command cannot be transformed to comparable parameters for the second command, [operate] the first command is processed as if the behavior of first command is unique [with the unique behavior instead of with the different behavior].
19. (amended) A computer system comprising:
 - a bus;
 - a data storage device coupled to said bus; and
 - a processor coupled to said data storage device, said processor operable to receive instructions which, when executed by the processor, cause the processor to perform a method comprising:
 - retrieving a first command from a script [containing one or more commands] written for a first color space[, the first command associated with zero or more input buffers and zero or more output buffers, the first command having zero or more parameters];
 - determining a behavior of the first command [in the first color space and in a second color space, the behavior comprising one of unique

behavior, transparent behavior, and different behavior], wherein the behavior of the first command [havs] is:
[the] unique [behavior] when the first command [only] operates only in the first color space,
[the] transparent [behavior] when the first command generates similar results in the first color space and in [the] a second color space, and
[the] different [behavior] when the first command generates different results in the first color space and in the second color space; and
processing an operation associated with the first command [using] in a preferred color space according to the behavior of the first command[, wherein the operation is processed in a preferred format based on current formats of the input buffers].

20. (amended) The computer system of claim 19, wherein the preferred [format] color space is determined to minimize color space conversion [of the input buffers].
21. (amended) The computer system of claim 19, wherein the preferred [format] color space is [a format used with] the second color space when data of at least one of [the] input buffers and output buffers is in [the format used with] the second color space.
22. (amended) The computer system of claim 19, wherein said processing [the first command in the preferred format] comprises converting data in one input buffer [the input buffers] to the preferred [format] color space.

23. (amended) The computer system of claim 19, wherein when the behavior of the first command [has the] is unique [behavior], the preferred [format] color space is [a format used with] the first color space.
24. (amended) The computer system of claim 19, wherein when the behavior of the first command [has the] is different [behavior], the first command is transformed to a second command in the second color space, wherein the second command performs a similar operation in the second color space as the first command in the first color space.
25. (amended) The computer system of claim 24, wherein [if the second command can not perform the similar operation with the zero] one or more parameters of the first command[, the parameters] are transformed to comparable parameters for the second command such that the second command performs the similar operation in the second color space using the comparable parameters as the first command in the first color space.
26. (amended) The computer system of claim 25, wherein the comparable parameters are compatible with the preferred [format] color space.
27. (amended) The computer system of claim 25, wherein if the [zero] one or more parameters of the first command cannot be transformed to comparable parameters for the second command, the first command is processed as if the behavior of the first command is unique [performed with the unique behavior instead of with the different behavior].

28. (amended) A computer system, comprising:
- means for retrieving a first command from a script [containing one or more commands] written for a first color space[, the first command associated with zero or more input buffers and zero or more output buffers, the first command having zero or more parameters];
- means for determining a behavior of the first command [in the first color space and in a second color space, the behavior comprising one of unique behavior, transparent behavior, and different behavior], wherein the behavior of the first command [has] is:
- [the] unique [behavior] when the first command [only] operates only in the first color space,
- [the] transparent [behavior] when the first command generates similar results in the first color space and in [the] a second color space, and
- [the] different [behavior] when the first command generates different results in the first color space and in the second color space; and
- means for processing an operation associated with the first command [using] according to the behavior of the first command[, wherein the operation is processed in a preferred format based on current formats of the input buffers].
29. (amended) The computer system of claim 28, wherein a preferred color space [the preferred format] is determined to minimize color space conversion[of the input buffers] in processing the operation associated with the first command.

30. (amended) The computer system of claim 28, wherein the operation associated with the first command is processed in [the preferred format is a format used with] the second color space when data of at least one of [the] input buffers and output buffers is in [the format used with] the second color space.
31. (amended) The computer system of claim 28, wherein means for processing [the first command in the preferred format] comprises means for converting data in one input buffer [the input buffers] to [the] a preferred format.
32. (amended) The computer system of claim 28, wherein when the behavior of the first command [has the] is unique [behavior], the operation associated with the first command is processed in [the preferred format is a format used with] the first color space.
33. (amended) The computer system of claim 28, wherein when the behavior of the first command [has the] is different [behavior], the first command is transformed to a second command in the second color space, wherein the second command performs a similar operation in the second color space as the first command in the first color space.
34. (amended) The computer system of claim 33, wherein [if the second command can not perform the similar operation with the zero] one or more parameters of the first command[, the parameters] are transformed to comparable parameters for the second command such that the second command performs the similar operation in the second color space using the comparable parameters as the first command in the first color space.

35. (amended) The computer system of claim 34, wherein the comparable parameters are compatible with the [preferred format] second color space.
36. (amended) The computer system of claim 34, wherein if the [zero] one or more parameters of the first command cannot be transformed to comparable parameters for the second command, the first command is processed as if the behavior of the first command is unique [performed with the unique behavior instead of with the different behavior].